ABSTRACT OF THE DISCLOSURE

A storage management system in which a volume provider incorporates an application programming interface (API) for receiving storage access information that characterizes high-level input/output (I/O) attributes of the storage volume such as intended access patterns, a

5   desired level of fault handling and optimization preferences. The volume provider and the underlying storage devices conform to the specified attributes as best as possible and resolve any conflicts with the communicated attributes. The volume providers monitor the storage volumes and may reconfigure the storage volumes in order to accomplish the desired attributes.